

## **Exploring Agricultural Sciences**

**Course Description:** Exploring Agricultural Sciences analyzes the different aspects of the agricultural industry. Most people have a limited understanding of the importance of the agricultural, food, fiber, and natural resources industry.

**Recommended Prerequisite:** None

**Recommended Credit:** 1

**Recommended Grade Level:** 8

**Course Codes:** A10 – **5135** or A12 – **5187\*\***

\*Marked areas to be taught in 6-9 week rotation.

\*\*Use A12 Course Code number for all programs. A-10 should be used for 10 month programs only.

## **Exploring Agricultural Sciences**

### **Standard 1.0**

Demonstrate the importance of agriculture in daily life.

### **Standard 2.0**

Demonstrate an understanding of the area of agribusiness.

### **Standard 3.0**

Demonstrate an understanding of the area of agricultural mechanics.

### **Standard 4.0**

Demonstrate an understanding of the area of animal science.

### **Standard 5.0**

Demonstrate an understanding of the area of natural resource management.

### **Standard 6.0**

Demonstrate an understanding of the area of horticulture.

### **Standard 7.0**

Demonstrate an understanding of the FFA in American agriculture.

## **Exploring Agricultural Sciences**

**Course Description:** This course is designed to give a general introduction to the agricultural, food, fiber, and natural resource industry. Students will evaluate the importance of agriculture in daily life, agribusiness, agricultural mechanics, animal science, natural resources, and horticulture.

### **Standard 1.0**

#### **Demonstrate the importance of agriculture in daily life.**

Learning Expectations and Performance Indicators:

- 1.1 Describe and explain the impact of agriculture on daily life.\*
- 1.2 Pass a safety test at 100% accuracy on all lab equipment.\*
- 1.3 Describe and demonstrate safe operation of agricultural lab equipment.\*
- 1.4 Identify the sources of different types of food.\*
- 1.5 Specify and explain the role of agriculture in the formation of the United States.
- 1.6 Specify and explain the changes in agriculture over the last 200 years.

### **Standard 2.0**

#### **Demonstrate an understanding of the area of agribusiness.**

Learning Expectations and Performance Indicators:

- 2.1 Identify careers and explain their role in agribusiness.\*
- 2.2 Describe and explain the role of leadership in agribusiness.
- 2.3 Describe the importance of group dynamics in agribusiness
- 2.4 Explain the role of the different types of agribusiness in society.\*
- 2.5 Demonstrate recordkeeping practices in agribusiness.
- 2.6 Identify different methods of communication.

### **Standard 3.0**

#### **Demonstrate an understanding of the area of agricultural mechanics.**

Learning Expectations and Performance Indicators:

- 3.1 Identify and explain the careers in agricultural mechanics.\*
- 3.2 Specify and explain the mechanical skills used in agriculture.
- 3.3 Define and explain importance of horsepower in agriculture.
- 3.4 Identify and explain the different power units used in agriculture.
- 3.5 Identify and explain the function of basic hand tools.
- 3.6 Identify and explain the function and safe use of power tools.
- 3.7 Specify and explain building methods used in agriculture.
- 3.8 Complete safety test with 100 percent accuracy.
- 3.9 Based on data collected from measurements, calculate acreage, length, and volumes.

#### **Standard 4.0**

##### **Demonstrate an understanding of the area of animal science.**

Learning Expectations and Performance Indicators:

- 4.1 Identify and explain careers in animal science.\*
- 4.2 Identify and explain the role of large animals in agriculture.
- 4.3 Identify and explain the species of small and companion animals.
- 4.4 Identify and explain the function of exotic animal species.
- 4.5 Specify and explain the importance and impact of animal health.

#### **Standard 5.0**

##### **Demonstrate an understanding of the area of natural resource management.**

Learning Expectations and Performance Indicators:

- 5.1 Identify and explain the careers in natural resources.\*
- 5.2 Identify and explain the function of wildlife species in Tennessee.
- 5.3 Identify and explain the functions of plant parts.
- 5.4 Diagram and explain the interrelationship between animals and plants.
- 5.5 Identify and explain the methods of soil conservation.
- 5.6 Specify and explain the types of pollution found in water.
- 5.7 Explain and specify the types of air pollution.

#### **Standard 6.0**

##### **Demonstrate an understanding of the area of horticulture.**

Learning Expectations and Performance Indicators:

- 6.1 Identify and explain the careers in horticulture.\*
- 6.2 Identify different plants used in greenhouses and landscaping.
- 6.3 Identify and explain the types of turfgrass.
- 6.4 Describe the role of aquaculture in society.
- 6.5 Describe the role of hydroponics in society.

#### **Standard 7.0**

##### **Demonstrate an understanding of the FFA in American agriculture.**

Learning Expectations and Performance Indicators:

- 7.1 Explain the history of the FFA.
- 7.2 Explain the benefits of the FFA.\*
- 7.3 Describe examples of Career Development Event activities in the FFA.\*
- 7.4 Describe examples of a Supervised Agricultural Experience Program.\*
- 7.5 Select a Supervised Agricultural Experience Program based on career goals and industry needs for each individual.\*